## **ABSTRACT**

The present invention relates to supplementing the diets to sows during the periods of gestation, lactation, and breeding by feeding L-carnitine and chromium. The supplementation enhances pork productivity by increasing the number of pigs born alive in the subsequent reproductive cycle. Sow diets of this invention include L-carnitine and L-carnitine salts and trivalent chromium salts, such as chromium picolinate and chromium nicotinate. L-Carnitine is generally added to the swine feed formulation in the amount of from about 20 to about 1500 ppm, and the trivalent chromium salt is generally added to the swine feed formulation in the amount of from about 20 ppb to about 1000 ppb. The invention also relates to supplemented sow diets and feed supplement formulation.